



THE PATENT OFFICE OF THE STATE INTELLECTUAL PROPERTY OFFICE
OF THE PEOPLE'S REPUBLIC OF CHINA

Address: No. 6 Xi Tucheng Lu, Jimeng Qiao Haidian District, Beijing Post code: 100088 P.O. BOX: Beijing 8020

Shanghai Patent & Trademark Law Office

Date of Dispatch
April 2, 2004

Application No.: 01122297.2	Applicant: MURATA MANUFACTURING CO., LTD.
Application Date: August 23, 2001	Agent:
Title: 中心电机组立体及びその製造方法、それを用いた非可逆回路素子及び通信装置	

NOTICE ON OFFICE ACTION

- ☒ According to the Request for Substantive Examination raised by the applicant and based on the provision of Item 1, Article 35 of the Patent Law, the Examiner has proceeded with the Examination as to Substance on the above mentioned application for patent for invention.

☐ According to Item 2, Article 35 of the Chinese Patent Law, the Patent Office has decided to examine the above application for patent for invention.
- ☒ The applicant has requested that the filling date of
Aug 25, 2000 at the JP Patent Office as the priority date,
_____ at the _____ Patent Office as the priority date,
_____ at the _____ Patent Office as the priority date,
_____ at the _____ Patent Office as the priority date,

☒ The applicant has already submitted the copy of the first filed prior application document certified by the receiving office of the country where the application was originally filed.

☐ The applicant has not submitted the copy of the first filed prior application document certified by the receiving office of the country where the application was originally filed. It is deemed not having claimed priority according to the provision stipulated in Article 30 of the Patent Law.

☐ This application is a PCT application.
- ☐ The applicant submitted on _____ and _____ the amendment documents.
On examination, among them,
the _____ submitted on _____ can not be accepted.
the _____ submitted on _____ can not be accepted.
Because the above amendment
☐ does not conform with the provisions of Article 33 of the Chinese Patent Law,
☐ does not conform with the provisions of Rule 51 of the Implementing Regulations of the Chinese Patent Law,
Refer to the text of the Notice for the specific reasons why the amendment cannot be accepted

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4. ☒ The examination has been proceeded on the original application documents.
☐ The examination is directed at the following application documents:
 Claim _____, page _____ of the specification, page _____ of the drawing of the original application documents submitted on the date of filing.
 Claim _____, page _____ of the specification, page _____ of the drawing submitted on _____.
 Claim _____, page _____ of the specification, page _____ of the drawing submitted on _____.
 Claim _____, page _____ of the specification, page _____ of the drawing submitted on _____.
 Abstract of the specification submitted on _____, the drawing of the Abstract submitted on _____.

5. ☐ This Notice is made under the condition of no search having been conducted.
☒ This Notice is made under the condition of search having been conducted.
☒ This Notice has cited the below comparison documents (the number of which shall continue to be used in the subsequent examination procedures):

No.	Title of Document	Date of Publication (or the filing date of the conflicting Application)
1	CN1235410A	Nov 17, 1999
2		
3		
4		

6. The conclusive opinion drawn from the examination:

☒ **As regards the Specification:**

- ☐ The contents of the application fall under the scope stipulated by Article 5 of the Patent Law for which no patent right shall be granted.
☐ The specification does not conform with the provision of Item 3, Article 26 of the Patent Law.
☒ The drafting of the specification does not conform with the provision of Rule 18 of the Implementing Regulations.

☒ **As regards the Claims:**

- ☒ Claim 1, 2 does not possess the novelty as stipulated in Item 2, Article 22 of the Patent Law.
☒ Claim 3 does not possess the inventiveness as stipulated in Item 3, Article 22 of the Patent Law.
☐ Claim _____ does not possess the practical applicability as stipulated in Item 4, Article 22 of the Patent Law.
☐ Claim _____ falls under the scope of Article 25 of the Patent Law where no patent right is to be granted.
☐ Claim _____ does not conform with the provision of Item 4, Article 26 of the Patent Law.
☐ Claim _____ does not conform with the provision of Item 1, Article 31 of the Patent Law.
☐ Claim _____ does not conform with the definition of invention as stipulated in Item 1, Article 2 of the Implementing Regulations of the Patent Law.
☐ Claim _____ does not conform with the provision of Item 1, Rule 13 of the Implementing Regulations of the Patent Law.
☒ Claim 1, 4 does not conform with the provisions of Rules 20 to 23 of the Implementing Regulations of the Patent Law.

Refer to the text of this Notice for the specific analyses of the conclusive opinion.

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7. Based on the above conclusive opinion, the Examiner deems that:
- ☐ The applicant shall amend the application documents in accordance with the requirements raised in the text of the Notice.
 - ☒ The applicant shall discuss in his observations reasons why this application for patent can be granted a patent right, and amend the portions indicated in the text of the Notice which have been deemed as not conforming with the provisions, or no patent right shall be granted.
 - ☐ There are no substantive contents in the application for patent that can be granted a patent right. If the applicant does not present reasons or the reasons presented are not sufficient, the application shall be rejected.
8. The applicant is asked to note the following items:
- (1) According to the provision of Article 37 of the Patent Law, the applicant shall submit his observations within **four months** from the receipt of this Notice. Where, without justified reasons, the applicant does not respond at the expiration of said date, the application shall be deemed to have been withdrawn
 - (2) The applicant shall amend his application according to Article 33 of the Patent Law. The amended documents shall be in duplicate, and the form, in conformity with the relevant provisions in the Examination Guide.
 - (3) The applicant and/or his agent can not, without first making an appointment, go to the Patent Office to have an interview with the Examiner.
 - (4) The observations and/or the amended documents shall be mailed or delivered to Department of Receipt, the Patent Office of the State Intellectual Property Office. No documents shall possess legal effects if not mailed or delivered to Department of Receipt.
9. The text portion of this Notice totals 2 page(s), and includes the following attachment(s):
- ☒ duplicate copy(ies) of cited comparison document(s), altogether 1 copy(ies) 3 pages.
 - ☐

Examination Department: _____ Examiner(Seal): _____

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The First Office Action

The following deficiencies exist in the application:

1. Claim 1 claims 中心電極組立体. Reference 1 (CN1235410A, Agent: corresponding to your case 511-0207/IY) has disclosed a lumped constant isolator, and has specifically disclosed the following technical features: it comprises a terminal block 3 provided on the bottom surface 2a of a case 2 made of magnetic metal, a magnetic assembly 4 provided on the terminal block 3, a box-like cap 5 made of the same magnetic metal as the case 2, a rectangular permanent magnet 6 affixed to the inner surface of the cap 5, forming a magnetic circuit, wherein the permanent magnet 6 applies a dc magnetic field to the magnetic assembly 4; The magnetic assembly 4 comprises three central conductors 8, 9 and 10, which intersect at angles of 120 degrees and are provided on the upper surface of a circular disk-like ferrite 7, with an interposed insulating sheet (not shown in the diagram), and a ground 11 connected to the central conductors 8-10 abutting on the lower surface of the ferrite 7 (Refer to line 24 of page 6 to line 7 of page 7 of the specification and fig. 1 in Reference 1). Therein, the magnetic assembly 4 corresponds to 中心電極組立体 in the present application. Obviously, there exists connecting electrode (接続電極) in Reference 1, but, the connecting electrode is integrated with the central conductors (the application does not define that the connecting electrode must have separated structure). The feature, a ground 11 connected to the central conductors 8-10 abutting on the lower surface of the ferrite 7, in Reference 1 explains that the back plane of the ferrite has conductor pattern (導体パターン). Comparing the technical solution claimed by claim 1 with the contents in Reference 1, their technical solutions are substantially identical, only literal expressive manner is slightly different. Further, the technical solution in claim 1 and Reference 1 belong to the same technical field and can produce the same technical effects. Therefore, claim 1 does not possess novelty prescribed in Item 2, Article 22 of the Patent Law.

2. Claim 2 claims 非可逆回路素子, its technical features have been disclosed by Reference 1 (Refer to remark 1 on claim 1), therein, lumped constant isolator 1 is just 非可逆回路素子. Therefore, claim 2 does not possess novelty prescribed in Item 2, Article 22 of the Patent Law, either.

3. Claim 3 claims 通信装置. It is general knowledge in the art that the nonreciprocal circuit device is used for communication device. So, it is obvious to the technician in the art to obtain the technical solution claimed by claim 3 by combining Reference 1 with the general knowledge in the art. Claim 3 does not have prominent substantive features or a notable progress, thus, does not possess inventiveness prescribed in Item 3, Article 22 of the Patent Law.

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4. Claim 1 claims 中心電極組立体, but, does not describe the effects of the 中心電極組立体, the literal expression in claim 1 does not reflect what technical problem to be solved. Further, structural relationship between 中心電極 and 絶縁膜 in claim 1 is not clear. Claim 1 only describes names of the above elements, however, structures of these elements and the positional relationship between them are not clear. This causes the technical solution not clear.

Claim 4 claims 中心電極組立体の製造方法, so, should be described by sequential steps. But, "とともに" in claim 4 shows that two steps are conducted simultaneously, obviously, this is wrong. 中心電極パターンの形成 and 絶縁膜の形成 are formed by at least six steps, while forming 導体パターン on 母基板の裏面 is completed by one step. So, process in claim 4 is not clear. Further, claim 4 does not describe step for forming connecting electrode, thus, source of the connecting electrode mentioned in claim 4 is not clear. Therefore, claims 1 and 4 do not conform with the provision prescribed in Item 1, Rule 20 of the Implementing Regulations of the Patent Law.

5. Meaning of "共通シールド部 276" in the specification is not clear. What element is shielded by the 共通シールド部 276? Therefore, the specification does not conform with the provision in Item 3, Rule 18 of the Implementing Regulations of the Patent Law.

Summing up the above reasons, the applicant should anew file amended application documents to overcome the deficiencies. The corresponding amendment to the specification should be made so that the claims conform with the provisions prescribed in Item 4, Article 26 of the Patent Law, that is, the claims are supported by the specification. The amendments made by the applicant should conform with the provisions in Article 33 of the Patent Law and Rule 51 of the Implementing Regulations of the Patent Law. The voluntary amendments will lead the amended application documents not being accepted.

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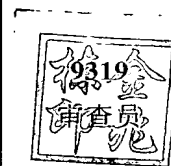
中华人民共和国国家知识产权局

邮政编码: 200233

上海市桂平路 435 号

上海专利商标事务所

沈昭坤



申请号: 01122297.2

部门及通知书类型: 9--C

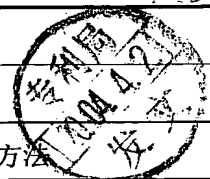
发文日期:

申请人:

株式会社村田制作所

发明名称:

中心电极组合体及其不可逆电路器件、通信装置和制造方法



第一次审查意见通知书

1. ☒ 依申请人提出的实审请求, 根据专利法第 35 条第 1 款的规定, 审查员对上述发明专利申请进行实质审查。

☐ 根据专利法第 35 条第 2 款的规定, 国家知识产权局决定自行对上述发明专利申请进行审查。

2. ☒ 申请人要求以其在:

日本	专利局的申请日	2000 年 8 月 25 日	为优先权日,
	专利局的申请日		为优先权日,
	专利局的申请日		为优先权日,
	专利局的申请日		为优先权日,
	专利局的申请日		为优先权日,

☒ 申请人已经提交了经原申请国受理机关证明的第一次提出的在先申请文件的副本。

☐ 申请人尚未提交经原申请国受理机关证明的第一次提出的在先申请文件的副本, 根据专利法第 30 条的规定视为未提出优先权要求。

3. ☐ 申请人于____年__月__日和____年__月__日提交了修改文件。

☐ 经审查, 其中: ____年__月__日提交的____不能被接受; ____年__月__日提交的____不能被接受;

因为上述修改: ☐ 不符合专利法第 33 条的规定。 ☐ 不符合实施细则第 51 条的规定。

修改不能被接受的具体理由见通知书正文部分。

4. ☒ 审查是针对原始申请文件进行的。

☐ 审查是针对下述申请文件进行的:

说明书 申请日提交的原始申请文件的第____页;
____年__月__日提交的第____页; ____年__月__日提交的第____页;
____年__月__日提交的第____页; ____年__月__日提交的第____页;

权利要求 申请日提交的原始申请文件的第____项;
____年__月__日提交的第____项; ____年__月__日提交的第____项;
____年__月__日提交的第____项; ____年__月__日提交的第____项;

附图 申请日提交的原始申请文件的第____页;
____年__月__日提交的第____页; ____年__月__日提交的第____页;
____年__月__日提交的第____页; ____年__月__日提交的第____页;

说明书摘要 ☐ 申请日提交的; ☐ ____年__月__日提交的;

摘要附图 ☐ 申请日提交的; ☐ ____年__月__日提交的。

5. ☐ 本通知书是在未进行检索的情况下作出的。

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回函请寄: 100088 北京市海淀区蓟门桥西土城路 6 号 国家知识产权局专利局受理处收

(注: 凡寄给审查员个人的信函不具有法律效力)



中华人民共和国国家知识产权局

- ☒ 本通知书是在进行了检索的情况下作出的。
☒ 本通知书引用下述对比文献(其编号在今后的审查过程中继续沿用):

编号	文件号或名称	公开日期 (或抵触申请的申请日)
1	CN1235410A	1999.11.17
2		
3		
4		

6. 审查的结论性意见:

- ☒ 关于说明书:
- ☐ 申请的内容属于专利法第 5 条规定的不授予专利权的范围。
 - ☐ 说明书不符合专利法第 26 条第 3 款的规定。
 - ☒ 说明书的撰写不符合实施细则第 18 条的规定。
- ☒ 关于权利要求书:
- ☒ 权利要求 1, 2 不具备专利法第 22 条第 2 款规定的新颖性。
 - ☒ 权利要求 3 不具备专利法第 22 条第 3 款规定的创造性。
 - ☐ 权利要求 _____ 不具备专利法第 22 条第 4 款规定的实用性。
 - ☐ 权利要求 _____ 属于专利法第 25 条规定的不授予专利权的范围。
 - ☐ 权利要求 _____ 不符合专利法第 26 条第 4 款的规定。
 - ☐ 权利要求 _____ 不符合专利法第 31 条第 1 款的规定。
 - ☐ 权利要求 _____ 不符合实施细则第 2 条第 1 款关于发明的定义。
 - ☐ 权利要求 _____ 不符合实施细则第 13 条第 1 款的规定。
 - ☒ 权利要求 1, 4 不符合实施细则第 20 条至第 23 条的规定。
 - ☐

上述结论性意见的具体分析见本通知书的正文部分。

7. 基于上述结论性意见, 审查员认为:

- ☐ 申请人应按照通知书正文部分提出的要求, 对申请文件进行修改。
- ☒ 申请人应在意见陈述书中论述其专利申请可以被授予专利权的理由, 并对通知书正文部分中指出的不符合规定之处进行修改, 否则将不能授予专利权。
- ☐ 专利申请中没有可以被授予专利权的实质性内容, 如果申请人没有陈述理由或者陈述理由不充分, 其申请将被驳回。
- ☐

8. 申请人应注意下述事项:

- (1) 根据专利法第 37 条的规定, 申请人应在收到本通知书之日起的 肆 个月内陈述意见, 如果申请人无正当理由逾期不答复, 其申请将被视为撤回。
- (2) 申请人对其申请的修改应符合专利法第 33 条的规定, 修改文本应一式两份, 其格式应符合审查指南的有关规定。
- (3) 申请人的意见陈述书和/或修改文本应邮寄或递交给国家知识产权局专利局受理处, 凡未邮寄或递交给受理处的文件不具备法律效力。
- (4) 未经预约, 申请人和/或代理人不得前来国家知识产权局专利局与审查员举行会晤。

9. 本通知书正文部分共有 2 页, 并附有下列附件:

- ☒ 引用的对比文件的复印件共 1 份 3 页。
☐



第一次审查意见通知书正文

该申请存在如下缺陷：

1、权利要求 1 要求保护一种中心电极组合体，对比为文件 1 (CN1235410A) 中披露了一种集中常数隔离器 1，具体特征如下：包括设置在由磁性金属制成的罩子 2 的底表面 2a 上的接线盒 3，设置在接线盒 3 上的磁性元件 4、由和罩子 2 相同的磁性金属制成的盒状盖子 5、附加到盖子 5 的内部表面的矩形永久磁铁，它形成磁路，永久磁铁 6 将 DC 磁场施加给磁性元件 4，磁性元件 4 包含三个中心导体 8、9 和 10，以 120 度相交，并设置在圆形盘状铁氧体 7 的上表面，其中有插入的绝缘片（图中未示出），中心导体 8-10 的接地端 11 在铁氧体 7 的下表面上邻接（参见说明书第 3 页第 17 行至第 23 行，附图 1），其中，磁性元件 4 相当于本申请中的中心电极组合体，显然对比文件 1 中的连接电极是存在的，只不过该连接电极与中心导体是一体的（本申请中也未限定连接电极必须是单独的结构，只要能够达到电路的导通就行），对比文件 1 中“中心导体 8-10 的接地端 11 在铁氧体 7 的下表面上邻接”就说明在铁氧体的背面有导体图案，该权利要求所要求保护的技术方案与该对比文件所公开的内容相比，所不同的仅仅是文字表达方式上略有差别，其技术方案实质上是相同的，且两者属于相同的技术领域，并能产生相同的技术效果，因此，权利要求 1 不具备专利法第二十二条第二款规定的新颖性。

2、权利要求 2 要求保护一种不可逆电路器件，其特征均以被对比文件 1 所披露（参见对权利要求 1 的评述），其中，集中常数隔离器 1 就是不可逆电路器件，该权利要求同样不具备专利法第二十二条第二款规定的新颖性。

3、权利要求 3 要求保护一种通信装置，权利要求 2 中的不可逆电路器件用到通信系统中是本领域普通技术人员的公知常识，在对比文件 1 的基础上结合

上述公知常识以获得该权利要求所要求保护的技术方案，对所属技术领域的技术人员来说是显而易见的，该权利要求不具备突出的实质性特点和显著的进步，因此，权利要求 3 不具备专利法第二十二条第三款规定的创造性。

4、权利要求 1 中要求保护一种中心电极组合体，但是没有记载该中心电极组合体的作用，从权利要求的文字部分反映不出其要解决的技术问题是什么，且该权利要求对于中心电极和绝缘膜的相互结构不清楚，仅仅只记载有上述结构的名称但是在整个技术方案中不清楚它们的相互结构和位置关系，使技术方案不清楚；权利要求 4 要求保护一种制造方法，应该将整个过程按照先后顺序的流程方法来描述，但是该权利要求的“同时”是说明上下两个过程是在同一时间形成，显然是不对的，中心导电图案和绝缘膜的全部形成过程就需要至少六个过程，然而在母板的背面形成导体图案只需要一个过程就行了，该流程就不清楚了；而且该权利要求并没有记载在通孔上形成连接电极的过程，对于权利要求后面出现的连接电极的由来不清楚；因此，权利要求 1、4 不符合专利法实施细则第二十条第一款的规定。

3、说明书中多处出现的“公共屏蔽部 276”含义不清楚，不清楚为什么叫做屏蔽部，其用于屏蔽什么结构特征描述不清楚；因此，说明书不符合专利法实施细则第十八条第三款的规定。

鉴于上述理由，申请人应当重新提交修改文件，克服目前所存在的缺陷。说明书要作适应性修改，以使权利要求符合专利法第二十六条第四款规定的权利要求不仅在实质上，而且在形式上均要得到说明书的支持。申请人的修改必须符合专利法第三十三条及专利法实施细则第五十一条第三款的规定，主动修改将会导致文本不予接受。

[19]中华人民共和国国家知识产权局

[51]Int. Cl⁶

H03H 9/46

[12] 发明专利申请公开说明书

[21] 申请号 99104734.6

[43]公开日 1999年11月17日

[11]公开号 CN 1235410A

[22]申请日 99.3.30 [21]申请号 99104734.6

[30]优先权

[32]98.3.30 [33]JP [31]83583/98

[32]99.2.12 [33]JP [31]34174/99

[71]申请人 株式会社村田制作所

地址 日本京都府

[72]发明人 冈田刚和 牧野敏弘

川浪崇 长谷川隆

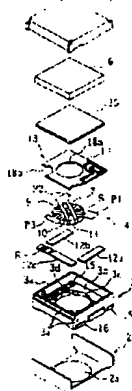
[74]专利代理机构 上海专利商标事务所
代理人 陈亮

权利要求书 2 页 说明书 8 页 附图页数 12 页

[54]发明名称 不可逆电路装置

[57]摘要

一种不可逆电路装置,在设置在低通滤波器的至少一部分的介质基片上具有电路元件,不可逆电路装置具有由寄生辐射引起的更小的干扰和不规则工作,另外,具有减小了的介入损耗。集中常数隔离器(一例不可逆电路装置)包括给磁性元件提供 DC 磁场的磁铁,依次具有多个交错的中心电极,它们在铁氧体附近交错。介质基片设置在永久磁铁和磁性元件之间。形成 π 型低通滤波器的电感器提供作为介质基片上的电路元件的一例,介质层或薄膜设置在介质基片和磁铁之间。



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图 3 是示出第一实施例的效果的特性图;

图 4A 和 4B 是示出根据本发明的另一个实施例的介质基片的示图;

图 5 是图 4A 和 4B 所示的实施例的隔离器的等效电路图;

图 6 是图 4A 和 4B 所示的实施例的隔离器的一部分的等效电路图;

图 7 是根据本发明的第三实施例的集中常数型隔离器的分解透视图;

图 8 是根据本发明的第四较佳实施例的集中常数型隔离器的分解透视图;

图 9 是根据本发明的较佳实施例的介质基片的分解透视图;

图 10 是根据本发明的另一个较佳实施例的介质基片的分解透视图;

图 11A 和 11B 是示出根据本发明的另一个较佳实施例的介质基片的图;

图 12 是实验的隔离器的分解透视图, 用于解释本发明的背景技术;

图 13 是图 12 所示的隔离器的等效电路图; 及

图 14 是图 12 所示的隔离器的一部分的等效电路图.

下面将参照附图描述本发明的较佳实施例.

图 1、2A 和 2B 是解释本发明的第一实施例的集中常数隔离器的图, 图 1 是隔离器的分解透视图, 图 2A 是设置在介质基片上的电感器的平面图, 而图 2B 是设置在介质基片的背面上的电极的透射平面图.

图 1 中, 集中常数隔离器 1 包含: 设置在由磁性金属制成的罩子 2 的底表面 2a 上的接线盒 3、设置在接线盒 3 上的磁性元件 4、由和罩子 2 相同的磁性金属制成的盒状盖子 5、附加到盖子 5 的内部表面的矩形永久磁铁, 它形成磁路、永久磁铁 6 将 dc 磁场施加给磁性元件 4.

磁性元件 4 包含三个中心导体 8、9 和 10, 以 120 度相交, 并设置在圆形盘状铁氧体 7 的上表面上, 其中有插入的绝缘片(图中未示), 中间导体 8-10 的接地端 11 在铁氧体 7 的下表面上邻接.

接线盒 3 由电绝缘的树脂制成, 包含矩形框状侧壁 3a, 它和底部壁 3b 形成整体, 通孔 3c 设置在底部壁 3b 上, 凹进部分 3d 容纳单片匹配电容器 12a-12c, 以及单片终端电阻器 R.

磁性元件 4 插入穿过通孔 3c, 从而磁性元件 4 的接地端 11 连接到罩子 2 的底部背面 2a.

用于表面安装的输入/输出端 15 和接地终端 16 设置在接线盒 3 的左侧和右侧壁 3a 的外部表面上, 并且输入/输出端子 15 在底部壁 3b 的上表面的拐角处引出.

说明书附图

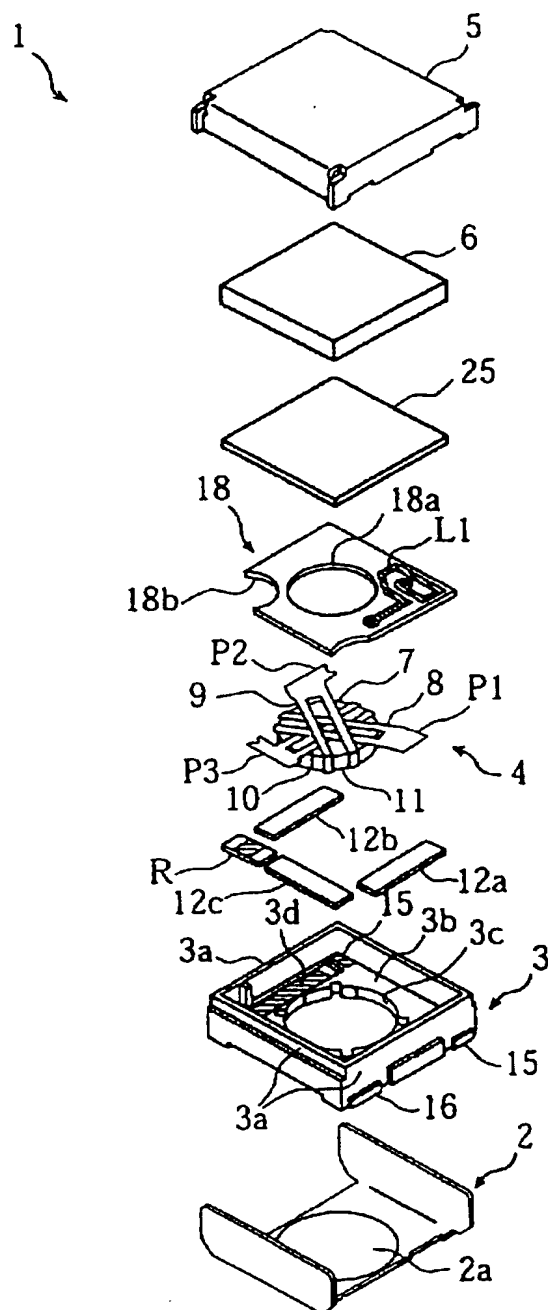


图 1

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